

## STATEMENT OF CONSIDERATIONS

REQUEST BY JOHN DEERE & COMPANY FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER A LOWER-TIER SUBCONTRACT WITH SOUTHWEST RESEARCH INSTITUTE UNDER NREL SUBCONTRACT NO. ZCI-8-17074-01 UNDER DOE CONTRACT NO. DE-AC36-83CH10093; W(A)-97-037; CH-0939

The Petitioner, John Deere & Company, has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above referenced subcontract entitled "Development of the Next Generation Medium-Duty Natural Gas Engine." The Petitioner is a lower-tier subcontractor under the referenced NREL subcontract with Southwest Research Institute (SRI), a not-for-profit organization.

The objectives of this subcontract are to increase the overall efficiency of a medium-duty natural gas engine to that of a state-of-the-art diesel, while retaining or increasing the emissions benefits from that of the current state-of-the-art natural gas engine. The work includes engineering design of the fuel injector system encompassing necessary modification of existing fuel injectors or redesign of the system in conjunction with injection hardware suppliers. Prototype injector hardware, based on results of the design phase, will be installed on the John Deere 8.1L engine. The prototype will be evaluated to determine the most promising technologies for integration together during Phase II of the project. The evaluation will include the study of in cylinder flow patterns, combustion strategy, variable geometry turbocharger (VGT) system design, and an enhanced wastegate system to accommodate the throttle's operation concept.

This engine development project is anticipated to take place in two phases, over a period of approximately 18 months. The total expected cost of the subcontract, over the two phases of the contract, is \$806,958.00, the Petitioner's share being \$201,740.00, for approximately twenty five percent (25%) cost sharing. The first phase of the contract, which is in progress, has a total budget of \$446,563 of which the Petitioner's cost share is \$112,163.00. Phase II of the contract has a total anticipated budget of \$360,395.00, of which the Petitioner's projected cost share is \$89,577.00. It is anticipated that this waiver will be applicable over both phases of the contract and contingent upon the Petitioner maintaining, in aggregate, substantially the same cost sharing percentage over the course of the subcontract (i.e., 25%).

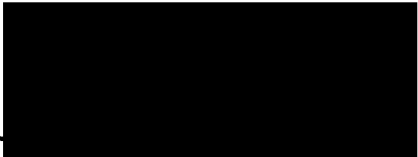
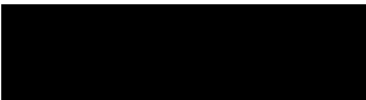
As noted in its waiver petition, Petitioner has an established non-governmental commercial position in the technology, with sales of approximately 130,000 medium and heavy duty diesel engines each year. The Petitioner is a recognized leader in the development of diesel and natural gas engines for off-road applications and will begin production of a 6.8L lean burn compressed natural gas engines for commercial bus and school bus applications. Prior to the

execution of this subcontract, Petitioner had invested substantial time and monies in developing and testing low emission electronically controlled compressed natural gas engines. Considering Petitioner's technical expertise, established market position, and significant investment in this technology, including sizable cost sharing in this subcontract, it is reasonable to conclude that Petitioner will continue to develop and ultimately commercialize the products which may arise from this subcontract.

The Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Petitioner has agreed that products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so. Further, Petitioner has agreed that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. There are currently numerous designs, as well as competitors, in the field of low emission alternative fuel vehicles. The success of this subcontract can be expected to stimulate investment, not only in this technology, but also in other competing technologies as well.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the subcontract in a fashion which will make the above technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR Part 784, all of which have been considered, it is recommended that the requested waiver be granted.

  
Thomas G. Anderson  
Assistant Chief Counsel  
Office of Intellectual  
Property LawDate: 8/18/98  
Mark LaMarre  
Patent Attorney  
Office of Intellectual  
Property LawDate: August 18, 1998

WAIVER ACTION - ABSTRACT  
W(A)-97-037

REQUESTOR

SUBCONTRACT SCOPE OF  
WORK

RATIONALE FOR DECISION

DISPOSITION

John Deere & Company

Development of a safe, low  
emission, medium duty natural  
gas engine.

Significant experience in gas  
engine technology -  
24.8% cost sharing

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver will not apply to any modification or extension of the subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:



James Eberhardt  
Program Director  
Office of Heavy Vehicle Technologies

Date: 12/2/99

APPROVAL:



Paul Gottlieb  
Assistant General Counsel for Technology  
Transfer

Date: 12-2-99

- (i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the decision to Patent Counsel, with a copy to the Contracting Officer; or
- (ii) Contending that the subject invention is not a subject invention, the contractor nevertheless discloses the subject invention and all facts pertinent to this contention to the Patent Counsel, with a copy to the Contracting Officer, or
- (iii) Establishes that the failure to disclose did not result from the contractor's fault or negligence.

(3) Pending written assignment of the patent application and patents on a subject invention determined by the Contracting Officer to be forfeited (such determination to be a Final Decision under the Disputes clause of this contract), the contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph shall be in addition to and shall not supersede any other rights and remedies which the Government may have with respect to subject inventions.

(t) U. S. COMPETITIVENESS The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

(End of clause)